

A Work Project, presented as part of the requirements for the
Award of a Master's Degree in Finance from the Nova School of Business and Economics.

CONSULTING PROJECT FOR JOSÉ DE MELLO SAÚDE:

ENHANCING REMOTE MEDICAL CARE IN THE PORTUGUESE MARKET

ESTIMATING THE POTENTIAL PROFITABILITY OF CLINICAL REMOTE SERVICES

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Abstract: The following report gives an overview of the viability of a Clinical Contact Centre as well as of the future challenges that José de Mello Saúde may face in the future. In relation to the Clinical Contact Centre, a qualitative research was performed regarding nurses' willingness to provide outbound contacts in a centralized contact centre. Additionally, an operational recommendation is presented, which materializes in the definition of the daily operations since pilot testing to steady-state. To complement this recommendation, a detailed cost-benefit analysis is also provided. Lastly, the future challenges of the healthcare industry were identified.

Key words: Clinical Contact Centre, Operations, Financial analysis, Future challenges.



8. CLINICAL CONTACT CENTRE



8. CCC

8.1. VIABILITY ANALYSIS

Current Situation

CURRENT SITUATION



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Today JMS is spending approximately 174 089€ in outbound contacts (follow-up and preparation). These contacts are not centralized neither being performed at 100%.

Nowadays, some nurses are doing outbound contacts in their hospitals. However, the majority of these contacts are done in the middle of the day with **no defined agenda or any structure**. Moreover, some contacts are **not being performed at 100%**.

Notes:

- In May 2019, the **Marketing Team visited the hospitals** and asked what kind of outbound contacts was being made at each unit.
- The right column represents the % of the contacts made based on all the acts performed.

For more details, see Appendix 12.

Existing Contacts made in JMS' Units										
<u>Follow-up contacts</u>	HCD	HCIS	HCP	HCC	HCTV	HCS	HCV	HCCO	ICUF	%
Outpatient surgery	✓	✓	✓	✓	✓	✓	✓	✓	✓	100%
Surgical hospitalization - adults	✓	✓		✓	✓	✓	✓			79%
Surgical hospitalization - paediatric	✓	✓	✓	✓	✓	✓	✓			93%
Medical hospitalization - adults	✓			✓	✓		✓			31%
Medical hospitalization - paediatric	✓		✓	✓						100%
Minor surgery				✓			✓			8%
Special exams*				✓						3%
Gastro exams				✓	✓	✓				26%
Day hospital (after 1st treatment)	✓						✓	✓		22%
Biopsies					✓		✓			9%
"Invasive" exams	✓ (3)			✓			✓			N/A
Post-partum	✓		✓							100%
Post-therapeutic	✓ (2)						✓ (1)			N/A
Emergency				✓ **	✓ (4)					25%
UCIP (1 month)			✓							16%
Follow-up ORL paediatric surgery								✓		1%
<u>Preparation contacts</u>	HCD	HCIS	HCP	HCC	HCTV	HCS	HCV	HCCO	ICUF	%
Gastro exams	✓		✓		✓	✓	✓	✓	✓	56%
Other exams					✓ (5)					6%
Surgeries			✓ (6)							N/A

Assumptions

- Not considering clinics;
- N/A –Not possible to quantify;
- After gathering all the current contacts made in each units, it was assumed #Calls = 100% of the #Acts performed in 2018;
- Follow-up call ~ 3 min (5 min for obstetric calls);
- Preparation call ~ 5 min;
- Special Exams: it was not possible to quantify urodynamic exams;
- Other Exams: it was not possible to quantify thyroid exams;
- One nurse spends 8h per week doing these contacts which is equivalent of **7 FTEs performing these contacts**.

	HCD	HCIS	HCP	HCC	HCTV	HCS	HCV	HCCO	ICUF	Total
Time spent on these contacts (min)	202 057	34 455	101 313	111 207	152 883	48 789	42 018	5 490	56 021	754 233
Total nurses allocated to these contacts	9	1	4	5	7	2	2	0	2	33
Hourly average price per FTE	16,08 €	16,55 €	13,00 €	13,59 €	13,16 €	12,69 €	10,14 €	14,71 €	11,77 €	
Annual cost	54 160 €	9 503 €	21 958 €	25 187 €	33 523 €	10 319 €	7 102 €	1 346 €	10 989 €	174 089 €

~7 FTEs

One FTE works 8 hours per day, 5 days a week, 48 weeks per year

Table 24 – Current outbound contacts



8. CCC

8.1. VIABILITY ANALYSIS

Interviews

NURSES' INTERVIEWS

Nurses' interviews were important to define the workflow and operation of the future CCC. Moreover, nurses are willing to conduct outbound calls in a centralized CCC, as they see the added value of this service.

QUALITATIVE RESEARCH

Four face-to-face in-depth interviews (Appendix 13) to nurses were conducted in order to understand their main challenges at work, as well as their willingness to provide outbound contacts in a CCC. Moreover, possible barriers to the centralization of these contacts were identified.

STRUCTURE:

1. Target selection (nurses from areas where it is common to perform outbound contacts and also a head of nurses, as she/he has a general vision of the business).
2. Direct Method – individual interviews to a relevant sample.

SAMPLE DETAILS:

Areas of Work

Audit Nurse: 1
Hospitalization: 1
Gastro: 1
Head of Nurses: 1

Work Location

HCIS: 3
HCC: 1

INTERVIEWS' HIGHLIGHTS

NURSE'S PAINS:

1. No time;
2. Overlap of daily tasks and activities;
3. Inexistence of a formal process and a proper place to conduct outbound calls.

PERCEPTION OF THE SERVICE:

1. Nurses should be allocated to the types of contacts according to their specialization;
2. Need for technical and clinical training;
3. Nurses want shifts to be rotational and once a week.

BARRIERS:

1. Centralization of all outbound contacts can lead to misleading communication;
2. Impersonal relationship with patients (people will be contacted by a different nurse);
3. Not every type of follow-up can be centralized – e.g. contacts to ostomy patients.

TOPICS OF DISCUSSION

1. **Nurses' pains:** main challenges of daily work and nurses' involvement with the outbound contacts (understand how the process works);
2. **Perception of the service:** suggestions to enhance the performance of the current contacts, preference on agenda organization (shifts) and opinion about which types of contacts can be performed in a CCC;
3. **Barriers:** main challenges for the implementation of this service.

OUTCOME: Workflow and operation definition



8. CCC

8.2. *RECOMMENDATIONS*

Pilot

The team proposes to implement the CCC in Viseu's CC as there is enough space and nurses and because of its cost advantage compared to Lisbon. A pilot testing will be run for adult's emergency mostly due to the current low satisfaction score given by customers.

The team proposes a 6-month **pilot testing** in follow-up contacts for **adults' emergency** in **Viseu's contact centre**. This project is expected to start in June 2020, after 6-months of development, initial training and testing.

LOCATION

Why Viseu?

- There is enough space in the actual CC as-is (**24 available spots** at the moment). Moreover, 36 spots are coming up in a near future.
- HCV has **enough nurses** to cover 100% of contacts.
- The **operation costs** of a CCC in Viseu are **lower than in Lisbon**:
 - The square meter in Viseu is 4,5€ whereas in Lisbon is equal to 7€ (which will turn into 12€ in a close future).
 - The average salary of nurses and administrative staff are lower.
- There is **less employment rotativity** in Viseu than in Lisbon.
- The proximity between the contact centre and HCV eases the circulation of staff.

CONSIDERATIONS & ASSUMPTIONS

- CCC operates **8 hours per day** and **7 days per week**;
- One nurse works **8 hours** per week and 48 weeks in a year;
- One day is split into **2 shifts**;
- The CCC should always have **at least one nurse everyday** to comply with SLAs, meaning that a nurse may have her/his shifts in two different days;
- Impossibility of performing outbound contacts on Monday between 11am and 12pm, due to mobile licensing restrictions, as it is an hour with high volume of contacts;
- Number of adult's emergency acts in 2018: 74 031. It was assumed that all the acts implied a contact (#Follow-up contacts in 2018: 74 031 \Leftrightarrow **37 016 contacts in 6 months**). This would **require a team of 5 nurses** per week and 1 head of nurses;
- JMS will spend **43 555€** (a detailed explanation will be presented latter).

PILOT

Why follow-up of adult's emergency?

- To initiate the CCC activity with a **success** pilot to surprise and retain customers and then extend to other activities and specialities as times goes by;
- Minimizing risks: today the follow-up of adult's emergency only exists in two units. If the pilot does not work out, only a small % of CUF clients will be exposed to this service;
- Adult's emergency is one of the clinical services with the **lowest satisfaction score**;
- A proficient follow-up will increase customer's satisfaction scores, avoid costly readmissions and will open opportunities to refer to more appropriate care such as specialized consultations.

In CCC:

5 nurses/week
 \Leftrightarrow
> 1 nurses/day



8. CCC

8.2. *RECOMMENDATIONS*

Steady-state

STEADY-STATE | POSSIBLE NURSES ALLOCATION

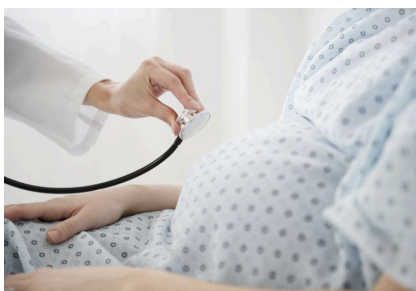


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The CCC will be divided in 5 groups according to the type of outbound contacts. Nurses and administrative staff will be allocated to pre-defined groups based on their specialized knowledge in order to secure the excellence of interaction with customers.

In a scenario where the pilot runs well and the **outbound contact service is extended to all types of follow-up and preparation**, JMS could have the following groups of nurses for specific contacts.

Maternal & Obstetric Health



- Childbirth – F*
- Breast biopsy – P**,F
- Amniocentesis – F

Surgery



- Surgical hospitalization – F
- Surgeries – F
- ★ Anaesthesia consultation – P

Medical Health



- Medical hospitalization – F
- Day hospital – F
- Adults' emergency – F

Paediatric Health



- Paediatric surgery – F
- Paediatric emergency – F
- Paediatric hospitalization – F
- ★ Vaccinations – F

Exams and biopsies



- Gastro exams – P
- Prostatic biopsy – P
- Biopsies – F
- Special exams (gastro, pneumology) – F

* F - Follow-up contact
** P - Preparation contact
★ - New services offered
A - Administrative' contacts

In order to fulfil all the outbound contacts, it is necessary a team of 56 nurses per week allocated into 2 shifts of 4 hours each. This translates into a monthly payroll expense cost of 21 158€.

Consideration: Preparation contacts will be performed by administrative staff (CC operators) except for the preparation of anaesthesia consultations. The remaining contacts will be allocated to nurses.

	Nurses' Outbound Contacts				Administrative's Outbound Contacts			
	# Contacts	Time (min)	#Nurses	Payroll expenses	# Contacts	Time (min)	#Adm.	Payroll expenses
Maternal & Obstetric Health								
F - Childbirth	3 506	17 530	0,8	2 554 €				
F - Amniocentesis	133	665	0,03	97 €				
F - Breasts biopsy	1 340	6 700	0,3	976 €				
P - Breasts Biopsy					1 340	6700	0,29	709 €
Surgical								
F - Surgical hospitalization	31 061	93 183	4,0	13 574 €				
F - Surgeries	27 615	82 845	3,6	12 068 €				
P - Anaesthesia consultation	25 232	126 160	5,5	18 377 €				
Medical Health								
F - Medical hospitalization	2 243	6 729	0,3	980 €				
F - Day hospital	29 096	87 288	3,8	12 715 €				
F - Adults' emergency	74 031	222 093	9,6	32 352 €				
Paediatric								
F - Paediatric surgery	2 951	8 853	0,4	1 290 €				
F - Paediatric emergency	26 653	79 959	3,5	11 647 €				
F - Paediatric hospitalization	5 958	17 874	0,8	2 604 €				
F - Vaccinations	11 021	33 063	1,4	4 816 €				
Exams & Biopsies								
F - Special exams (gastro, pneumology)	127 407	382 221	16,6	55 677 €				
F - Biopsies	36 482	109 446	4,8	15 943 €				
P - Gastro exams					127 001	635 005	27,56	67 205 €
P - Prostatic biopsy					593	2965	0,13	314 €
Total (annual)	404 729	1 274 609	56	185 668 €	128 934	644 670	28	68 228 €
Allocation per day			8,00				4,0	

Table 25 – Total payroll expenses

Payroll expenses = 21 158 €/ month

Including payroll expenses that JMS already incurs with outbound contacts that are currently being performed

Assumptions

- One nurse works **8h per week**, split into 2 shifts of 4h each;
- One day is split into **2 shifts** (CCC operates 8h/day);
- #Contacts = **100% of #acts performed**;
- Nurse's price/hour = 8,74€** (it was considered the price of a service provider nurse, once this provider has a more flexible agenda and is cheaper for CUF);
- Administrative's price/hour = 6,35€** (Includes Single Social Tax, insurance, food allowance).

Possible Allocation in CCC





8. CCC

8.2. *RECOMMENDATIONS*
Operation

CLINICAL CONTACT CENTRE | USE CASE

“

António is a 55-year old man and a regular CUF client. In this time of his life, he noticed some intestinal tract changes, so he decided to schedule an appointment with a gastro doctor in HCC. The doctor advised António on doing a colonoscopy.

Soon after scheduling the exam, he was contacted by a CC operator which explained all the exam requirements as well as provided him with some insights about the exam. The colonoscopy went perfectly well and 24h later António received a follow-up contact from a nurse to know if any complications arisen.

WORKFLOW (1/2)



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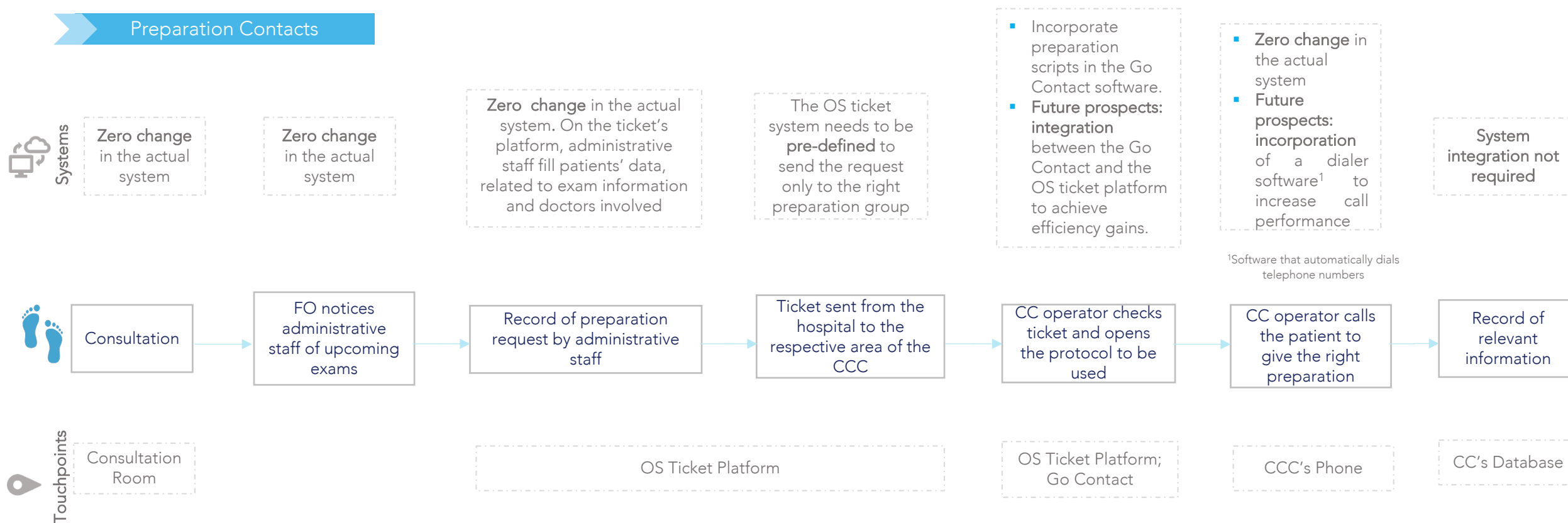
The preparation contacts will be centralized, and tickets will be sent from the hospital to a specific group of CC operators. Additionally, targeted CC operators will have access to the patients' ticket and scripts. In the end, all relevant information will be recorded.

CONTEXT

Methodology:

- The **Customer Service Department** explained how channels worked and all the respective platforms/systems.
- All the systems' requirements have been validated with the **ISD Team**.
- The workflow was built together with the **contact centre supervisor** and also, it was discussed the feasibility of incorporating the scripts into the Go Contact software.

Preparation Contacts



Notes:

Preparation contacts will be conducted over and over until the patient answers the call.
Preparation contacts will be performed by administrative staff except for preparation of anaesthesia consultations.

Figure 11 – Workflow

WORKFLOW (2/2)



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The follow-up contacts will be centralized, and tickets will be sent from the hospital to the respective nursing area. Additionally, targeted nurses will have access to the patients' ticket, scripts and clinical information. In the end, all relevant information will be recorded.

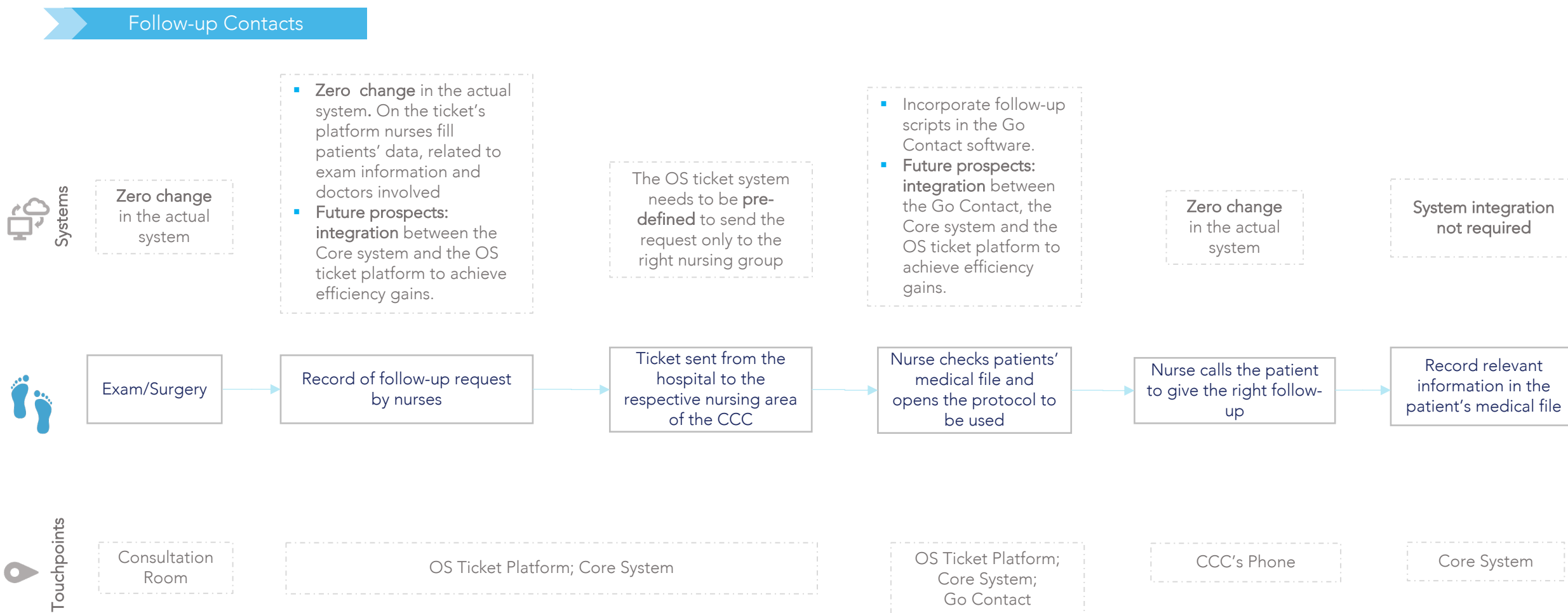


Figure 12 – Workflow

Note: Follow-up contacts will be conducted to a maximum of 3 times per patient.

Sources: Team Analysis | Contact Centre Team | ISD